

### **REMARKS**

Claims 1-26 are now pending in the application. Claims 1 and 14 are now amended. The claim amendments are fully supported by the application as filed and do not introduce new subject matter. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

### **TELEPHONIC INTERVIEW**

Applicant's representative, Brent G. Seitz, thanks Examiner Mruk for the courtesies extended during the telephonic interview of June 1, 2006. During the interview, differences between the amended claims and the cited art were discussed. No agreements were reached.

### **REJECTION UNDER 35 U.S.C. § 103**

Claims 1 – 7, 13 – 20, and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Toye (U.S. Pat. No. 4,068,144) in view of Arakawa et al. (U.S. Pat. No. 6,270,180).

Claims 8 – 12 and 21 – 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Toye in view of Arakawa et al. and further in view of Speakman (U.S. Pat. No. 6,503,831).

These rejections are respectfully traversed.

Amended Claims 1 and 14 each recite, in part and with reference to Figures 1-4 for exemplary purposes only as the invention includes numerous embodiments, the following:

controlling an X-direction drive motor [4] that moves the aperture [20a] in an X-direction and a Y-direction drive motor [5] that moves the aperture in a Y-direction using an arithmetic control section [8a] in receipt of setting information generated by a control computer [C];

generating drive signals using the waveform generating section based on drive signal data generated by the arithmetic control section, the waveform generating section generates a plurality of drive signals of predetermined shapes, including the normal drive signal and the heating drive signal;

outputting the drive signals to a switching circuit [33b]; and

generating selection data using the arithmetic control section and outputting the selection data to a switching signal generator [33a], the selection data designates the drive signal to be applied to the piezoelectric element [30].

Thus, as set forth in amended Claims 1 and 14, the arithmetic control section 8a carries out a number of different functions, such as the following: 1) controls the X-direction drive motor 4 and the Y-direction drive motor 5; 2) generates drive signal data that drives the waveform generating section to generate drive signals, including the normal drive signal and the heating drive signal; 3) generates selection data and outputs the selection data to a switching signal generator, the selection data designates the drive signal to be applied to the piezoelectric element.

The Toye reference appears to disclose a liquid jet modulator with a piezoelectric hemispherical transducer. The Toye reference fails to disclose or suggest, for example, an X-direction drive motor, a Y-direction drive motor, or an arithmetic control section, as set forth in amended Claims 1 and 14.

The Arakawa et al. reference appears to disclose, with reference to Figure 3, a carriage driving mechanism 6 that drives a carriage 2 in an X direction. The carriage 2 is stationary with respect to the Y direction. Instead, it is the recording sheet P that

moves in the Y direction. Thus, the Arakawa et al. reference fails to disclose or suggest "a Y-direction drive motor that moves the aperture in a Y-direction using an arithmetic control section," as set forth in amended Claims 1 and 14.

The Arakawa et al. reference also appears to disclose, with reference to Figures 1 and 7, a CPU 11 and a control circuit 23. However, the Arakawa et al. reference fails to disclose or suggest an arithmetic control section that carries out the following functions, as set forth in amended Claims 1 and 14: 1) controls an X-direction drive motor 4 and a Y-direction drive motor 5; 2) generates drive signal data that drives the waveform generating section to generate drive signals, including a normal drive signal and a heating drive signal; 3) generates selection data and outputs the selection data to a switching signal generator, the selection data designating the drive signal to be applied to the piezoelectric element.

The Toye reference and the Arakawa et al. reference each fail to disclose or suggest each and every feature of amended Claims 1 and 14. Therefore, combination of these references fails to render obvious independent Claims 1 and 14, as well as those claims dependent therefrom. Applicants respectfully request reconsideration and withdrawal of this Section 103 rejection of independent Claims 1 and 14 and those claims dependent therefrom.

### **CONCLUSION**

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is

believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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